

Message

From: Kathleen Stanton [KStanton@CleaningInstitute.org]
Sent: 10/20/2020 7:12:53 PM
To: Parsons, Doug [Parsons.Douglas@epa.gov]; Douglas Troutman [DTroutman@CleaningInstitute.org]; sbennett@thehcpa.org; Wheeler, Cindy [Wheeler.Cindy@epa.gov]
CC: Nathan E. Sell [NSell@CleaningInstitute.org]
Subject: RE: Exposure Data for Consumer Uses of 1,4-dioxane

Hello All,
 Some thoughts on your questions below.

1. Do you have any existing measured concentration levels or known concentration ranges of 1,4-dioxane in finished consumer products, specifically dishwasher detergent, dish soap, laundry detergent, and surface cleaners?

ACI does not have measured concentrations of 1,4-dioxane in these products. The default going forward (nationwide) will be New York State's 1ppm limit for these products. This potentially is a high threshold as New Jersey is considering a lower concentration restriction.

2. Do you have any existing survey or other data on specific product types (e.g., detergents, cleaners, dish soap) that can be used to inform duration or frequency of cleaning or washing activities?
3. Do you have any existing survey or other data on specific product types (e.g., detergents, cleaners, dish soap) that can be used to inform the amount of product used per day or per activity and/or the level of dilution typical for products used in hand washing activities?

Data for questions 2 and 3 can be found in the Appendices of the *Consumer Product Ingredient Safety: Exposure and Risk Screening Method for Consumer Product Ingredients* (2nd Edition). A partial view of one of the exposure route (in this case, dermal) table is below. Inhalation and oral exposures are also modeled for. The publication can be found here: https://www.aciscience.org/docs/Consumer_Product_Ingredient_Safety_v2.0.pdf

Consumer Product Ingredient Safety
 Exposure and Risk Screening Methods for Consumer Product Ingredients

Appendix II-A-1: Dermal Exposure Parameters to Estimate Screening Exposures to Consumer Products – North America
 (References, abbreviations and special rules are described in footnotes at end of table)

	Product Use Freq. [1/FQ]	Product Amount Used per Use [g]	Product Amount Used per Day [g]	Product Use Conc. [PPM]	Product Use Conc. [PPM]	Contact Area [cm ²]	Product Retained [g]	File Thickness [mm]	Product Retained [g]	Percent Transferred [g]	Percent Absorbed [g]	Body Weight [kg]	Exposure Duration [hrs]	Product Exposure [mg/kg-day]	Model/Equation Reference	Model/Equation Formula
	[unitless]	[grams]	[grams]	[%	[ppm]	[cm ²]	[grams]	[mm]	[%	[%	[%	[kg]	[hrs]			Note: CF refers to conversion factor of 1000mg/1g; assuming 100% dermal absorption.
Laundry and Dishwashing																
Laundry detergent – washing clothes		1.01	A						0.004	A	1%	A	100%	0.0001	ACI; Exposure: Dermal; Laundry Detergent	$A \times 100 \times 100 \times 100 \times 100 \times 100$
Laundry detergent packets – washing clothes		1.01	A						0.004	A	1%	A	100%	0.0001	ACI; Exposure: Dermal; Laundry Detergent	$A \times 100 \times 100 \times 100 \times 100 \times 100$
Dishwashing liquid – dish soap – washing dishes		1.01	A						0.004	A	1%	A	100%	0.0001	ACI; Exposure: Dermal; Dishwashing Liquid	$A \times 100 \times 100 \times 100 \times 100 \times 100$
Fabric softeners, dryer sheets – washing clothes		1	A						0.004	A	1%	A	100%	0.0001	ACI; Exposure: Dermal; Fabric Softener	$A \times 100 \times 100 \times 100 \times 100 \times 100$
Laundry detergent packets – conditioning towels	1	A		1%	A	1.01	A	0.004	0.004			100%	0.001	0.0001	ACI; Exposure: Dermal; Laundry Detergent	$A \times 100 \times 100 \times 100 \times 100 \times 100$
Laundry detergent packets – conditioning towels	1	A		100%	A	0.6	A	0.004	0.004			100%	0.001	0.0001	ACI; Exposure: Dermal; Laundry Detergent	$A \times 100 \times 100 \times 100 \times 100 \times 100$
Laundry detergent packets – conditioning towels	1	A		100%	A	1.0	A	0.004	0.004			100%	0.001	0.0001	ACI; Exposure: Dermal; Laundry Detergent	$A \times 100 \times 100 \times 100 \times 100 \times 100$
Dishwashing liquid – hand soap	1	10	B			5.6	A	0.004	0.004			100%	0.001	0.0001	ACI; Exposure: Dermal; Dishwashing Liquid	$A \times 100 \times 100 \times 100 \times 100 \times 100$
Dishwashing liquid – hand soap	1	10	B			0.004	A	0.004	0.004			100%	0.001	0.0001	ACI; Exposure: Dermal; Dishwashing Liquid	$A \times 100 \times 100 \times 100 \times 100 \times 100$
Hand surface cleaner – general	1	10	B	1%	P	0.01	A	0.004	0.004			100%	0.001	0.0001	ACI; Exposure: Dermal; Hand Surface Cleaner	$A \times 100 \times 100 \times 100 \times 100 \times 100$
SPC liquid	1	A	10	100%	P	0.004	A	0.004	0.004			100%	0.001	0.0001	ACI; Exposure: Dermal; SPC Liquid	$A \times 100 \times 100 \times 100 \times 100 \times 100$
SPC gel (hand sanitizer)	1	G		100%	A	1.0	A	0.004	0.004			100%	0.001	0.0001	ACI; Exposure: Dermal; SPC Gel	$A \times 100 \times 100 \times 100 \times 100 \times 100$
SPC spray (hand sanitizer)	1	G		100%	A	1.0	A	0.004	0.004			100%	0.001	0.0001	ACI; Exposure: Dermal; SPC Spray	$A \times 100 \times 100 \times 100 \times 100 \times 100$

Please let us know if we can further assist,

Best regards,
Kathy

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From: Parsons, Doug <Parsons.Douglas@epa.gov>
Sent: Tuesday, October 20, 2020 10:28 AM
To: Douglas Troutman <DTroutman@CleaningInstitute.org>; sbennett@thehcpa.org; Wheeler, Cindy <Wheeler.Cindy@epa.gov>
Cc: Kathleen Stanton <KStanton@CleaningInstitute.org>; Nathan E. Sell <NSell@CleaningInstitute.org>
Subject: Exposure Data for Consumer Uses of 1,4-dioxane

Hello Kathleen, Steve, Doug, and Nathan

Thanks again for all the information to date. We are continuing to deliberate on 1,4-dioxane as part of the final risk evaluation under TSCA.

We have a few questions that are pasted below regarding consumer exposure scenarios for surface cleaners, dish soap, dishwashing detergent and laundry detergent.

Can you please take a look and let us know if you have answers to these questions, and if so, we would be very interested in obtaining the information as soon as possible. We are also glad to organize a call if that would be useful. Please let us know.

Thanks, doug

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